SEQUENCE LISTING

<110>   University of Rochester
        Kool, Eric

<120>   CIRCULAR DNA VECTORS FOR SYNTHESIS OF RNA AND DNA

<130>   220.00010142

<150>   US 09/569,344
<151>   2000-05-11

<150>   US 08/805,631
<151>   1997-02-26

<150>   US 08/393,439
<151>   1995-02-23

<150>   US 08/047,860
<151>   1993-04-15

<160>   129

<170>   PatentIn version 3.1

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<223> m5c

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<222> (9)..(9)

<223> m5c

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<222> (15)..(15)

<223> m5c

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<222> (20)..(20)

<223> m5c

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<222> (24)..(24)

<223> m5c

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<222> (34)..(34)

<223> m5c

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<223> optimized T7 RNA polymerase promoter site

<400> 39
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<210> 40

<211> 53

<212> DNA

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<223> 53mer circle

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tttcttcccc cgaagaaaag agaaggagag agatccctag agagaggaag act   53

<210> 41

<211> 53

<212> RNA

<213> Artificial Sequence

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<223> stem-loop multimer which binds HIV-1 gag RNA

<400> 41
gggaagaaaa gucuuccucu cucuagggau cucucuccuu cucuuuucuu cgg   53

<210> 42

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<223> 53 circle

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tttcttcccc cgaagaaaag aataaggaag aagcctccga agaaggaaca act   53

<210> 43

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<212> RNA

<213> Artificial Sequence

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<223> stem-loop multimer which binds to bcr-abl mRNA

<400> 43
gggaagaaaa guuguuccuu cuucggaggc uucuuccuua uucuuuucuu cgg   53

<210> 44

<211> 45

<212> DNA

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<213> Artificial Sequence

<220>

<223> 45 circle

<400> 44
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<210> 45

<211> 45

<212> RNA

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<223> hairpin multimer which binds HIV-1 rev protein

<400> 45
ucuaaauaag ggcuccaucg aaggauguug aggaacuuau uuaag   45

<210> 46

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<212> DNA

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<223> circle

<400> 46
ttttgaacta gagttttcgg ctttcgcctc ttcagaaaag ccctctctc   49

<210> 47

<211> 49

<212> RNA

<213> Artificial Sequence

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<223> multimer RNA transcript

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gagggcuuuu cugaagaggc gaaagccgaa aacucuaguu caaaagaga   49

<210>   48

<211>   49

<212>   RNA

<213>   Artificial Sequence

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<223>   monomeric ribozyme complementary to K28 junction in chronic myelo
         id leukemia (Philadelphia Chromosome mutation)

<400>   48
aaaagagaga gggcuuuucu gaagaggcga aagccgaaaa cucuaguuc   49

<210>   49

<211>   15

<212>   RNA

<213>   Artificial Sequence

<220>

<223>   Philadelphia chromosome mRNA

<400>   49
agaguucaaa agccc   15

<210>   50

<211>   49

<212>   RNA

<213>   Artificial Sequence

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<223>   monomeric ribozyme

<400>   50
aaaagagaga gggcuuuucu gaagaggcga aagccgaaaa cucuaguuc   49

<210>   51

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<213> Artificial Sequence

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<223> AS83 nanocircle

<400> 51
gttccgactt tccgactctg agtttcgact tgtgagagaa ggatctcttg atcacttcgt   60

ctcttcaggg aaagatggga gat   83

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<223> H83 nanocircle

<400> 52
gttccgagtt ttggaccgtt ggtttcgact tgtgagagaa ggatctcttg atcacttcgt   60

ctcttcagca aaatatggga gat   83

<210> 53

<211> 10

<212> RNA

<213> Artificial Sequence

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<223> catalytic H83 transcription product

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<210> 54

<211> 25

<212> RNA

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<223>   catalytic H83 transcription product

<400>   54
uuuugcugaa gagacgucga aacaa   25

<210>   55

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<223>   non-autolytic AH83 chimera

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<212>   RNA

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<223>   catalytic AH83 transcription product
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cagucggaaa   10

<210>   57

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<223>   catalytic AH83 transcription product

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uuuugcugaa gagacgucga aacca   25

<210>   58

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<211> 83

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<223> string of hammerhead-motif RNAs

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agagacgaag ugaucaagag auc   83

<210> 59

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<223> monomeric hammerhead-motif RNA

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cucacaaguc gaaacucaga guc   83

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cttctcagga atc   73

<210> 61

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uaguccaguu uuc   73

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<400>   62
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<223>   splint oligonucleotide

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<400> 65
tcaagagatc cttctctcac aagtcgaaac   30

<210> 66

<211> 83

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<400> 66
ggaaagucgg aacaucuccc aucuuucccu gaagagacga agugaucaag agauccuucu   60

cucacaaguc gaaacucaga guc   83

<210> 67

<211> 83

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<400> 67
caaaacucgg aacaucuccc auauuuugcu gaagagacga agugaucaag agauccuucu   60

cucacaaguc gaaaccaacg guc   83

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<223> nucleotides 1752-1767 from HIV-1 gag

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<210> 69

<211> 15

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<223> target for the AS83 ribozyme which includes sequences 64-73 of av
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<400> 69
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<210> 70

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acaacgtgtg tttctctggt ctgcttctca ggaat   35

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<223> sequences of HIV-1 pol gene

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      yl)-propyl-3-O-
      (2-cyanoethyl)-(N,N-diisopropyl)-phosphoramidite on its 5' phosph
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<400> 76
natgtgttgc cattctga   18

<210> 77

<211> 24

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<223> splint

<400> 77
aactcctcag tcaatgtgtt gcca   24

<210> 78

<211> 58

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<211> 58

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<211> 45

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<210> 82

<211> 58

<212> DNA

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<400> 85
cacggactca tcagaatggc aacacatt   28

<210> 86

<211> 58

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<400> 86
gacactggag ttcgtctggt aaagtatgtt gctacgactt ctttatttac cacgatgc   58

<210> 87

<211> 45

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cacggactca tcagagagcg ttcactct   28

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aggtcgacta tggagaaaaa aatcactgg   29

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<210> 95

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ggtacccaaa aggccatccg tcaggat   27

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aatggagaaa aaaatcactg g   81

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<210> 98

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<400> 100
agagcgttcg ggttactcca   20

<210> 101

<211> 103

<212> DNA

<213> Artificial Sequence

<220>

<223> single-stranded nanocircle containing 40nt of randomized sequence
       , and 63nt fixed sequence encoding a hammerhead ribozyme

<220>

32

<221> misc_feature

<222> (19)..(58)

<223> a, g, c, or t

<400> 101
gactgaggag ttcgtctgnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnntc   60

tttcagtttc gtcctcacgg actcatcaga atggcaacac att   103

<210> 102

<211> 0

<212> DNA

<213> skipped sequence

<400> 102
000

<210> 103

<211> 0

<212> DNA

<213> skipped sequence

<400> 103
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<210> 104

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> E1 motif I

<400> 104
gcaacgaatc agactctttc ggtgacattg cccagtttat   40

<210> 105

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> E38 motif II

<400> 105
gycacgatct gaatagtcgt tcatcctyag cggtagcgaa   40

<210> 106

<211> 0

<212> DNA

<213> Skipped Sequence

<400> 106
000   3

<210> 107

<211> 0

<212> DNA

<213> Skipped Sequence

<400> 107
000   3

<210> 108

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> nucleotide sequence containing E15 motif III

<400> 108
gcttaaggat taattgcatg ttattcttta ggagcctcga   40

<210> 109

<211> 40

34

<212> DNA

<213> Artificial Sequence

<220>

<223> nucleotide sequence containing E15 motif III

<400> 109
gtaaagtatg ttgctacgac ttctttattt accacgatgc   40

<210> 110

<211> 0

<212> DNA

<213> Skipped Sequence

<400> 110
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<210> 111

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> selected nucleotide sequence

<400> 111
gagcagtggt caactgacgg cttcgaaatg atatgcagcg   40

<210> 112

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> selected nucleotide sequence

<400> 112
tatgacgata ggattagacg tgtgggggta ttttcactac   40

35

<210> 113

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> selected nucleotide sequence

<400> 113
gtctcactcg gaggaggagt ctgacaagat gggatgctgc   40

<210> 114

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> selected nucleotide sequence

<400> 114
ggtattgcag actatttagc ctctgagagc cagaacggtc   40

<210> 115

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> selected nucleotide sequence

<400> 115
gagtggtaag tactgggagc cactcacgac aacgaacaa   39

<210> 116

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> selected nucleotide sequence

<400> 116
gtgctattcg tggctatact gttaatgtgt cgcaccattc 40

<210> 117

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> selected nucleotide sequence

<400> 117
ggccccgttt aggtacaatc acatgtacta gcgttgtggt 40

<210> 118

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> selected nucleotide sequence

<400> 118
gtagggttaa tatccttctc gtatgaccgt ggaagacgtc 40

<210> 119

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> selected nucleotide sequence

<400> 119
ggatgcgtag cgtaaagcgt tcgtatctcg aggtaagctt 40

<210> 120

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> selected nucleotide sequence

<400> 120
gagccatgga gcatactagt tgaactctag cttctagtcc   40

<210> 121

<211> 103

<212> DNA

<213> Artificial Sequence

<220>

<223> E1

<400> 121
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tttcagtttc gtcctcacgg actcatcaga atggcaacac att   103

<210> 122

<211> 103

<212> DNA

<213> Artificial Sequence

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<223> E15

<400> 122
gactgaggag ttcgtctggt aaagtatgtt gctacgactt ctttatttac cacgatgctc   60

tttcagtttc gtcctcacgg actcatcaga atggcaacac att   103

<210> 123

<211> 103

<212> DNA

<213> Artificial Sequence

38

<220>

<223> E38

<400> 123
gactgaggag ttcgtctggc cacgatctga atagtcgttc atcctcagcg gtagcgaatc   60

tttcagtttc gtcctcacgg actcatcaga atggcaacac att   103

<210> 124

<211> 13

<212> RNA

<213> Artificial Sequence

<220>

<223> marA cleavage site

<400> 124
aagugucaga gcg   13

<210> 125

<211> 103

<212> RNA

<213> Artificial Sequence

<220>

<223> active marA

<400> 125
agagugaacg cucucugaug aguccgugag gacgaaacac uuucugcauc gugguaaaua   60

aagaagucgu agcaacauac uuuaccagac gaacuccagu guc   103

<210> 126

<211> 103

<212> RNA

<213> Artificial Sequence

<220>

<223> inactive marA

<400> 126
agagugaacg cucucugaug aguccgugag gacgacacac uuucugcauc gugguaaaua 60

aagaagucgu agcaacauac uuuaccagac gaacuccagu guc 103

<210> 127

<211> 63

<212> RNA

<213> Artificial Sequence

<220>

<223> short marA

<400> 127
agagugaacg cucucugaug aguccgugag gacgaaacac uuucucagac gaacuccagu 60

guc 63

<210> 128

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> probe

<400> 128
ctccctgtag tccagttttc g 21

<210> 129

<211> 73

<212> DNA

<213> Artificial Sequence

<220>

<223> DNA template encoding self-processing haripin ribozyme

<400> 129
ttcctgagaa gtcaaccaga gaaacacacg ttgtggtaca ttacctggta cctccctgta 60

gtccagtttt cga 73

40